

**Amendment to the Specification:**

Page 1, below the title and above "Technical Field", please insert the following new paragraph:

--This application is the United States national phase application of International Application PCT/JP2004/017824 filed November 24, 2004.--

On page 37, please replace the first full paragraph with the following amended paragraph:

In order to generate and detect the ultrasonic longitudinal wave and the ultrasonic shear wave at the same position in the gap between the slab support rolls adjacent to each other in the continuous casting machine, a small-sized electromagnetic ultrasonic sensor is required which can be inserted in the roll-to-roll small gap (generally 40 to 75 mm). Although the electromagnetic ultrasonic sensor is itself well known, a small-sized electromagnetic ultrasonic sensor adaptable for such a requirement, i.e., capable of generating and detecting the ultrasonic longitudinal wave and the ultrasonic shear wave at the same position, has not been proposed in the past. According to the present invention, as shown in Fig. 2, since the magnets [[32]] 31 are arranged in the transverse direction of the slab 1, three or more magnetic poles can be disposed side by side. It is therefore possible to insert the electromagnetic

ultrasonic sensor in the narrow gap between the slab support rolls 102 so that the ultrasonic longitudinal wave and the ultrasonic shear wave can be generated and detected at the same position. Further, because the number of sensors to be installed is reduced, not only the installation cost, but also the maintenance cost can be cut.